

Lack of time permitted only a cursory inspection of these several centers of botanical activity, a glance into the plant houses at the Agricultural Department, and a sight of the Botanic Garden from the distance; and it may be that other botanical attractions in the city were entirely overlooked. Enough, however, was seen to make it clear that Washington contains many elements of botanical interest, and that valuable botanical work is being done there, directed by a coterie of genial botanists. Let fellow scientists pay the city a visit whenever convenient to do so, and they will be amply rewarded. — J. C. A.

EDITORIAL.

THE TWO EXTREMES of botanical teaching are frequently referred to. They may be called the ancient and the modern, and neither alone is productive of the best results. The subject is a much discussed one, but is never decided, the chief result being a settling down to some intermediate position which is likely to be the right one. When two methods of teaching have their acknowledged advantages, and when the only disadvantage of either is that it lacks the other, it would seem that the best method would be to combine the two, and thus obtain all the advantage and eliminate all the disadvantage. The ancient method gives a wide range of acquaintance with external forms, a general knowledge of the plant kingdom and its affinities, a living interest in the surrounding flora; but it disregards the underlying morphology of minute structures and chemical processes, the great principles which bring plant life into one organic whole. The modern method, on the contrary, takes a few types, carefully examines their minutest structures and life work, and grounds well in general biological principles; but it loses the relation of things, as well as any knowledge of the display of the plant kingdom in its endless diversity, and worse than all for the naturalist, cultivates no love for a flora at hand and inviting attention. The former is the method of the field, the latter of the laboratory. The wise teacher will adopt both methods and thus avoid the greatest disadvantage of either. The most natural way of combining the two seems to be to begin with the old method, an unrivalled one in awakening enthusiastic interest and kindling the naturalists' fire, and then to lead to the other. What naturalist has not begun with the fever for collecting? And to what more natural impulse in the young can appeal be made? Theoretically, the science of botany may be said to best begin with the study of protoplasm or *Protococcus*, but the natural order of the human mind in approaching the subject may be different. We venture to make the assertion that no competent teacher of botany is ever satisfied with the results from using one method

exclusively, and that no teacher, however strongly he may write or talk concerning modern methods as the only ones, fails to incorporate some of the old with the new. The botanical teaching of the future will consider these not as two opposing methods, but as complementary, both essential to the rounding out of a botanical course.

BEFORE THE botanical activity at our American colleges can be much increased, the Board of Trustees, Regents and Presidents must get rid of the prevalent and most pernicious idea that a college professor's time must be chiefly occupied by teaching. An acquaintance of the writer received lately an invitation to the botanical chair of a well-known Ohio college, in which, after reciting the duties of the chair, the President added: "As at present the professor's whole time will not be occupied, he may be asked to take also some additional work of a congenial nature." Why can not those in authority see that the giving up of the whole time to instruction is the chief cause of the lack of scientific spirit in our colleges as compared with those of Germany? Give any man who has the capacity for original research in him the time necessary for the prosecution of such work and in five years he will attract more students to the institution with which he is connected than he would by fifty years of the most commendable teaching. It is not the fame of DeBary the teacher, but of DeBary the investigator, that draws students to Strasburg. And it is so in every case. The host of German botanists, who might be named, attract American students, not because they are eloquent lecturers or faithful instructors, but because the German University demands that they spend the chief share of their time in conducting original investigation. When American colleges are willing to pay men living salaries, when they demand that *their* professors shall be able to conduct original researches, and when they allow time for the work, then shall we see botany and all the kindred sciences flourish. Such a college would be as a tree planted by the rivers of water!

OPEN LETTERS.

The Honzo Dsufu.

In looking over your note, p. 46, *ante*, on "A Japanese botanical work," I found some typographical errors in the name of its author, which should be Iwasaki Tsunemasa, or rather in your way of writing a personal name—Tsunemasa Iwasaki. He lived in Tokyo, and devoted his time and attention to making illustrations of plants in the extensive collection of his own garden, and of those which he met with during his botanical tours and elsewhere. Most of his drawings were made from nature, and with such artistic skill and knowledge of the characters of plants, that one can determine the species with the aid of his plates with readiness and safety. This great work was finished in 1828. The arrangement of the work is after the classical Chinese herbal, the Honzōkōmoku. I think that there